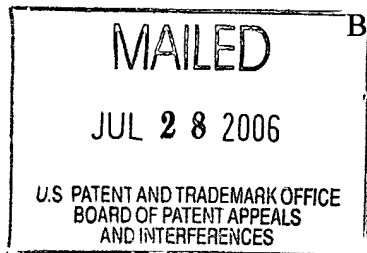


The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE



---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* ROBERT E. DUTHIE, JR.

---

Appeal No. 2006-2112  
Application No. 09/903,825

---

ON BRIEF

---

Before GARRIS, TIMM, and JEFFREY T. SMITH, *Administrative Patent Judges*.

JEFFREY T. SMITH, *Administrative Patent Judge*.

***DECISION ON APPEAL***

Applicant appeals the Examiner's final rejection of claims 1 to 10, all of the pending claims. We have jurisdiction under 35 U.S.C. § 134.<sup>1</sup>

---

<sup>1</sup> In rendering this decision we have considered appellant's position as presented in the Briefs filed September 8, 2005 and January 11, 2006. We have considered the examiner's position as set forth in the Final rejection mailed February 2, 2005 and the Examiner's Answer mailed November 8, 2005.

***CITED REFERENCES***

The Examiner relies on the following references in rejecting the appealed subject matter:

Wilson	4,963,750	Oct. 16, 1990
Duthie, Jr. (Duthie)	5,547,635	Aug. 20, 1996

Claims 1 to 10 stand rejected under 35 U.S.C. § 103(a) as obvious over Wilson and Duthie.

Upon careful consideration of the respective positions presented by the Appellant and the Examiner, we find ourselves in agreement with the Examiner. We affirm the stated rejection for the reasons set forth in the Answer, and we add the following primarily for emphasis.

***DISCUSSION***

Appellant's invention relates to an apparatus and method of disinfection and pasteurization of fluids employing ultraviolet light. Claims 1 and 7, as presented in the Appendix to the Brief, are reproduced below:

1. Apparatus for disinfection/pasteurization of fluids comprising:
  - (a) a mercury/gallium metal halide ultraviolet lamp enclosed within an ozone free metallic doped quartz envelope;
  - (b) an ozone free, metallic doped quartz enclosure for the lamp; and
  - (c) a vessel containing the lamp and enclosure and having an inlet, an outlet and a chamber in fluid communication therewith defining a flow path for fluid to be disinfected/pasturized [sic, pasteurized].
7. A method for disinfection/pasteurization of fluids comprising:
  - (a) providing a mercury/gallium metal halide ultraviolet lamp enclosed within an ozone free metallic doped quartz envelope;

- (b) providing an ozone free, metallic doped quartz enclosure for the lamp;
- (c) providing a vessel containing the lamp and enclosure and having an inlet, an outlet and a chamber in fluid communication therewith defining a flow path for fluid to be disinfected/pasturized [sic, pasteurized]; and
- (d) operating the lamp to introduce ultraviolet radiation and heat from the lamp into the fluid with the enclosure preventing build up of ozone.

Appellant argues that the claimed invention is directed to a method and apparatus for disinfection/pasteurization of fluids. Appellant asserts that Wilson does not disclose an apparatus for disinfection/pasteurization. Appellant further argues that a person of ordinary skill in the art would not have been motivated to look to the Wilson reference when addressing a problem in the field of disinfection/pasteurization. (Brief, page 4). Appellant refers us to the specification, page 7, for a discussion of sterilization and disinfection. (*Id.*).

The discussion of sterilization versus disinfection appearing in the specification has been fully considered. This discussion provides that sterilization provides the elimination or total destruction of microbial and viral life, while disinfection is the reduction of pathogenic microorganisms to a safe level by inhibiting cellular processes. (Specification, page 7, lines 5-9). Based on the description appearing in the specification, when a process of sterilization has been performed the process of disinfection has also been performed. That is, a process which destroys/eliminates microbial and viral life has achieved a reduction of pathogenic microorganisms. If the organisms have been destroyed the cellular processes have been inhibited. Thus, the apparatus and process described by Wilson for sterilization purposes would

also be relevant to a person of ordinary skill in the art addressing the problem in the field of disinfection/pasteurization.

Appellant argues (Brief, pages 4 and 5) that the proposed combination of Wilson and Duthie would not result in the claimed invention, particularly part (b) of claims 1 and 7.

Appellant's argument is not persuasive for the reasons set forth by the Examiner in the Answer on page 6. Further, Duthie discloses the suitability of using a mercury/gallium metal halide ultraviolet lamp with titanium-doped ozone free quartz envelope in sterilization operations. (See column 5, lines 14-26 and column 6, lines 7-30). Appellant's argument that Wilson teaches against the use of quartz tubes (Brief, page 5) is not persuasive. Wilson discloses that the use of TEFLON on the surrounding tube element (1) reduces fouling in the sterilization process. (Column 3, lines 26-36). As such, we agree with the Examiner's position as set forth on page 6 of the Answer.

Appellant in the Reply Brief argues that part (c) of claim 1 and claim 7 is entitled to patentable weight. (Reply Brief, pages 1 and 2).

It appears that Appellant is asserting that the reference to disinfection/pasteurization in this portion of the claim must be considered. The claim limitation in dispute has been considered by us above and by the Examiner in the statement of the rejection. The Appellant has not set forth the operating conditions of the apparatus or the operating requirements for the claimed method that produce disinfection/pasteurization. It is apparent from the present record that a mercury/gallium metal halide ultraviolet lamp enclosed in an ozone free metallic doped quartz envelope is suitable for sterilization processes. (Note the Duthie reference). Appellant has not

Appeal No. 2006-2112  
Application No. 09/903,825

identified the structure of the apparatus or the operational conditions for the method which distinguishes the claimed subject matter from the cited prior art.

### ***CONCLUSION***

For the foregoing reasons and those set forth in the Answer, based on the totality of the record, having evaluated the prima facie case of obviousness in view of Appellant's arguments, we conclude that the preponderance of evidence weighs in favor of obviousness of the claimed subject matter within the meaning of § 103. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The decision of the Examiner is affirmed.

Appeal No. 2006-2112  
Application No. 09/903,825

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

***AFFIRMED***

  
BRADLEY R. GARRISS  
Administrative Patent Judge

  
CATHERINE TIMM  
Administrative Patent Judge

# BOARD OF PATENT APPEALS AND INTERFERENCES

  
JEFFREY T. SMITH  
Administrative Patent Judge

JTS:clm

Appeal No. 2006-2112  
Application No. 09/903,825

Martin G. Linihan  
Hodgson Russ LLP  
Suite 2000  
One M&T Plaza  
Buffalo, NY 14203-2391